

III. REMARKS

Claims 1, 4-7, 11-12, and 19 are pending in this application. By this amendment, claims 1, 4, 6-7, 12, and 19 have been amended. Claims 2-3, 8-10, and 13-18 were previously canceled. Applicants do not acquiesce in the correctness of the rejections and reserve the right to present specific arguments regarding any rejected claims not specifically addressed. Further, Applicants reserve the right to pursue the full scope of the subject matter of the original claims in a subsequent patent application that claims priority to the instant application. Reconsideration in view of the following remarks is respectfully requested.

In the Office Action, claims 1, 4-5, 7, 11-12 and 19 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Brichta, U.S. Patent No. 5,864,483, in view of McKnight, U.S. Patent No. 6,557,035. With respect to claim 1, Applicants assert that the combination of cited references fails to teach or suggest each and every feature of the claimed invention, including, predetermined sample criteria requiring a predetermined, minimum number of samples in the set of samples, and terminating the step of determining a trend if the required minimum number of samples is not met. (See claim 1, and as similarly recited in claims 7, 12, and 19.) In support of its rejection, the Office asserts that Brichta discloses,

“...a sample ‘set’ size, col 2/lines 2-17, predetermined acceptable values col 3/lines 60-67, sample population rolling ‘over time’ time period, col 7/lines 30-37, determine whether the analyzed sample satisfies a predetermined level over time, col 9/lines 16-27[.]” (See Office Action, pp. 4-5.)

Applicants submit that Brichta fails to disclose, *inter alia*, terminating the step of determining a trend if the analyzed set of samples fails to satisfy a predetermined, minimum number of samples.

Interpreting Brichta only for the purposes of this response, Applicants submit that Brichta merely discloses, “[t]his predetermined period may comprise the previous thirty days, the previous sixty days, or any other suitable period of time. The rolling sample basis provides a stable, accurate estimate for the distribution of occurrences according to the characteristics.” See col. 7, lines 31-35. However, Brichta does not disclose a sample set wherein the *number of samples* obtained over a sampling interval must exceed a predetermined minimum, and terminating the trend determination if that minimum is not met. Instead, Brichta teaches a sample set contingent only upon a preset duration of *time*, with no minimum threshold requirement. In contrast, the claimed invention teaches, *inter alia*, a predetermined, minimum number of samples in the set of samples, and disregarding the set if the minimum is not met. See claim 1. As such, when the sampling interval expires, the number of samples obtained during the interval is compared to a minimum threshold number. If the number of samples is below the minimum threshold, no effort is made to continue the trend determination process and the current process cycle is ended. Brichta fails to teach or suggested this claimed feature. McKnight does not cure this deficiency. Accordingly, Applicants respectfully request that the Office withdraw its rejection.

With respect to claim 7, Applicants assert that both of the cited references fail to disclose each and every element of the claimed invention, including, determining a ratio of the predefined statistical parameters, and determining whether the ratio of the calculated statistical parameters meets predefined threshold requirements. Interpreting Brichta only for the purposes of this response, Applicants submit that Brichta merely discloses, “...a statistical mean for the population of occurrences, a standard deviation from the statistical mean, an upper control limit defined as a predetermined number of standard deviations above the mean...” (See col. 7, lines

21-25). In Brichta, a population set is averaged, and the standard deviation is determined. Col. 10, lines 50-52. Upper and lower control limits are then defined as a certain number of standard deviations above and below the mean. Col. 10, lines 64-67. However, Brichta fails to disclose, *inter alia*, determining a ratio of the standard deviation and the statistical mean for the entire set, and comparing the determined ratio value to a predefined threshold requirement. In contrast, the claimed invention recites, *inter alia*, determining a ratio of the calculated predefined statistical parameters of each obtained set of samples, and determining whether the ratio of the calculated statistical parameters meets predefined threshold requirements. *See* claim 7. A set of samples is considered reliable (and thus suitable for use in the present invention) if the determined ratio of the mean value and the standard deviation does not exceed a predetermined percentage threshold. Therefore, merely calculating the mean and standard deviation, as disclosed by Brichta, is not equivalent to determining the ratio of the statistical parameters and comparing the ratio to a threshold requirement, as recited by the claimed invention. Accordingly, Applicants respectfully request that the Office withdraw the rejection.

Furthermore, Applicants submit that Brichta fails to disclose each and every element of claim 7, including, "terminating the step of generating a mathematical representation of a current trend in the network performance metric if the ratio of the calculated statistical parameters for an obtained set of samples fails to meet the predefined threshold requirements." In support of its rejection, the Office asserts Brichta discloses, "...eliminating the occurrences of sample[s] of metric values that do not satisfy said predetermined criteria, i.e., not using analyzing any of these occurrences or using these occurrences for further calculations col 11/lines 2-32[.]" *See* Office Action, p. 3. Interpreting Brichta only for the purposes of this response, Applicants submit that Brichta merely teaches disregarding samples which fall outside the "stable region,"

as defined by an upper and lower control limit. *See* FIGS. 3A-3B. These outlier sample points are considered an anomaly and are disregarded during subsequent statistical analysis. *See* col. 11, lines 2-14. However, Brichta fails to disclose, *inter alia*, terminating the current trend analysis if the ratio of the statistical parameters for the *entire set* fails to meet the predefined threshold requirements.

In contrast, the claimed invention recites terminating the trend if the ratio of the calculated statistical parameters of an obtained set of samples fails to meet the predefined threshold requirements. *See* claim 7. The claimed invention discards the *entire set* of samples if the value obtained from the ratio of the mean and the standard deviation fails to meet a predefined threshold value. In contrast, Brichta only discards individual data points (as opposed to the *entire set*) that are outside the upper and/or lower control limits. Accordingly, Applicants submit that Brichta fails to disclose each and every element of claim 7 and respectfully request withdrawal of the rejection.

Still furthermore, Applicants submit that none of the cited references disclose, *inter alia*, the step of canceling the generated alert, as recited by claim 7. This claimed feature will be further discussed below with respect to claim 6, and is herein incorporated.

In the Office Action, independent claims 12 and 19 are rejected under the same rationale as claims 1 and 7. As a result, Applicants herein incorporate the arguments submitted above with respect to claims 1 and 7. Accordingly, Applicants respectfully request withdrawal of the rejection.

With respect to claim 4 (and as similarly recited in claim 11), Applicants assert that neither of the cited references disclose or suggest the step of "...determining whether the standard deviation of the set is greater than a predetermined percentage of the mean of the set of

samples." In support of its argument, the Office asserts that the upper control limit, as disclosed in Brichta, discloses this claimed feature of the present invention. *See Office Action*, p. 2. Applicants herein incorporate the arguments made above with respect to claim 7, and again submit that merely calculating the mean and standard deviation, as disclosed by Brichta, is not equivalent to determining the percentage (ratio) of the statistical parameters and determining whether the standard deviation of the set is greater than a predetermined percentage of the mean of the set of samples, as recited by the claimed invention. Accordingly, Applicants respectfully request that the Office withdraw its rejection.

In the Office Action, claim 6 is rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Brichta, in view of McKnight, in further view of Baumann et al. (Baumann), U.S. Patent No. 5,469,148. *See Office Action*, p. 4. The Office admits that neither Brichta nor McKnight disclose this claimed feature. However, in support of its rejection, the Office asserts that Baumann discloses canceling the alarm signal. *Id.* In response, Applicants have amended claim 6 to now recite, *inter alia*, "...canceling a previously generated alert if the trend in actual service based on obtained samples of the metric using linear regression indicates that the performance violation time will fall outside the fixed time window." (Note: claim 7 has been similarly amended to include this feature.) Applicants submit that Baumann fails to disclose or suggest, *inter alia*, canceling an alert if the trend, as manifested by trend-line slope, indicates that a violation will not occur in a fixed time window. Accordingly, Applicants submit that none of the cited references disclose this claimed feature, and respectfully request withdrawal of the rejection.

With respect to dependent claims 4-6, and 11, Applicants herein incorporate the arguments presented above with respect to the independent claims from which the claims

depend. The dependent claims are believed to be allowable based on the above arguments, as well as for their own additional features.

IV. CONCLUSION

In light of the above remarks, Applicants respectfully submit that all claims are in condition for allowance. Should the Examiner require anything further to place the application in better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the number listed below.

Respectfully submitted,



Ronald A. D'Alessandro
Reg. No.: 42,456

(DLP)

Hoffman, Warnick & D'Alessandro LLC
75 State Street, 14th Floor
Albany, New York 12207
(518) 449-0044
(518) 449-0047 (fax)